



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,059	06/15/2006	Rene Johan Haan	TS1391 US	8848

23632 7590 01/03/2008  
SHELL OIL COMPANY  
P O BOX 2463  
HOUSTON, TX 772522463

EXAMINER
----------

NAGUBANDI, LALITHA

ART UNIT	PAPER NUMBER
----------	--------------

1621

MAIL DATE	DELIVERY MODE
-----------	---------------

01/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,059	<b>Applicant(s)</b> HAAN ET AL.	
	<b>Examiner</b> Lalitha Nagubandi	<b>Art Unit</b> 1621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the international Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/15/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

***Detailed Action***

***Status of the Claims***

1. Claims 1-20 are pending. Claims 1- 20, are considered for examination in this office action.

***Specification***

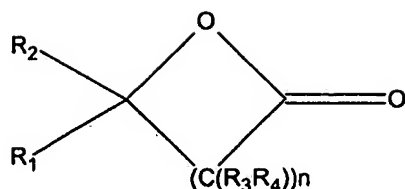
2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicants' cooperation is requested in correcting any errors of which applicant may become aware of in the specification.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

Claims 1- 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kummer et al ( US Pat. No. 4,777,285 dated Oct. 11, 1988).

3. Applicants' claim a process for the preparation of an alkyl alkenoate starting from a lactone of general molecular formula:



The process embodies, reaction of the above lactone with a C<sub>1</sub>-C<sub>4</sub> alkyl alcohol in a liquid phase in the presence of a *strong acid catalyst* at transesterification conditions to form the alkyl alkenoate, wherein alkyl alkenoate and alcohol are continuously removed from the liquid phase by *distillation*.

The process is carried out at a temperature in the range of from 100 to 300° C and the pressure in the reaction zone is in the range of from 0.01 to 10 bar (absolute). Further, the process embodies the lactone to be gamma valerolactone and the alkyl alkenoate as alkyl pentenoate.

Kummer et al disclose, a process for the preparation of alkenecarboxylates starting from lactones and using alkanols. ( see col.1, lines 45-55).

The reaction was carried out from 150° to 400°C and the pressure being in the range of 0.5 to 10 bar. The process discloses the list of suitable acidic catalysts suitable for liquid phase reaction.

Further, the process discloses the advantage of obtaining the desired product, the alkenecarboxyate by fractional distillation (see col 2, lines 40-45).

Although the disclosed prior art does not exemplify the use of gamma valerolactone as embodied in **claim 6**, the instant process is inherently taught in the reference with enough guidance which can be practiced by an ordinary artisan. An ordinary artisan can further extend the process to other valerolactones, such as the gamma valerolactone.

Thus the instant claims are rejected based on the fact that, the claiming of a new use, new function or unknown property which is *inherently* present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430,433 (CCPA 1977). *In re Crish*, 393 F.3d 1253, 1258,73 USPQ 2d 1364, 1368 (Fed. Cir. 2004), The court states that “ just as the discovery of properties of a *known material* does not make it novel, the identification and characterization of a prior art material also does not make it novel”. Please see MPEP 2112.

### ***Conclusion***

4. No claims are allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lalitha Nagubandi whose telephone number is 571 272 7996. The examiner can normally be reached on 6.30am to 3.30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne, Eyler can be reached on 571 272 0871. The fax


Application/Control Number:  
10/583,059  
Art Unit: 1621

Page 5

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lalitha Nagubandi  
Patent Examiner  
Technology Center 1600  
December 27<sup>th</sup>, 2007.

  
**Samuel A Barts**  
Primary Patent Examiner  
Technology Center 1600